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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,678	07/13/2001	Tokihiro Umemura	017499-0171	4288

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FOLEY AND LARDNER
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WASHINGTON, DC 20007

EXAMINER

TOATLEY, GREGORY J

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,678

Applicant(s)

UMEMURA ET AL.

Examiner

Gregory J. Toatley, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement received 7/13/03 has been considered and entered into the application. See attached 1449.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The examiner respectfully suggests that the Applicant carefully review the specification for idiomatic and grammatical errors, which may have inadvertently overlooked.

Art Rejection Rationale

4. At the outset, the examiner notes that claims are to be given their broadest reasonable interpretation during prosecution. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969); In re Yamamoto, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984); Burlington Indus. V. Quigg, 822 F.2d 1581, 3 USPQ2d 1436 (Fed. Cir. 1987); In re Morris, 43 USPQ2d 1753, 1756 (Fed. Cir. 1997). In responding to this Office action, applicants are reminded of the requirements of 37 CFR §§ 1.111 and 1.119 that applicants specifically point out the specific distinctions believed to render the claims patentable over the references in presenting responsive arguments. See M.P.E.P. § 714.02. The support for any amendments made should also be specifically pointed out. See M.P.E.P. § 2163.06.

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 is rejected under 35 U.S.C. 102(e) as being anticipated by the reference of Okamura et al. (US 6317343 B1). The reference of Okamura et al. shows:

A power control device (*fig.2A – 2F*) comprising an electric power storage device provided across a power supply line for a load and including an electric double layer capacitor (EDLC) bank (capacitors CA1 – Can, CB1 – CBn, and CM) including a plurality of parallel-connected rows of EDLC unit cells, each of which rows includes a plurality of series-connected EDLC unit cells.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the

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applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference of Okamura et al. The applicant has claimed various specific values for the internal resistance and energy density for the EDLCs. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the EDLCs of Okamura with the claimed values, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claim 2, 6, 10, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference of Okamura et al. as applied to claim 1 above, and further in view of the reference of Keimel (US 5591212 A). The reference of Okamura is silent regarding the combination of the EDLC's (or supercapacitors) and a battery as claimed. The reference of Keimel teaches of such an arrangement of capacitors (54) and batteries (50) in at least figs. 1 and 3 in order to provide a power source that has a high energy density and power output. It would have been obvious to one having ordinary skill in the art to incorporate the teaching of the reference of Keimel into the invention of Okamura et al. for the purpose of providing a high energy density, high power output device. Regarding the values of internal resistance, energy density and output density as claimed in claims 6, 10, 14 and 19, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the EDLCs of Okamura with the claimed values, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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11. Claims 3, 4, 7, 8, 11, 12, 15, 16 and 18 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference of Okamura et al. as applied to claim 1 above, and further in view of Keimel and Kamiya et al. (US 5246552 A). The reference of Okamura is silent regarding the combination of the EDLC's (or supercapacitors) and an aluminum solid electrolytic capacitor as claimed in claim 3, and the battery, EDLC, and aluminum capacitor combination as claimed in claim 4. The reference of Keimel teaches (see fig. 3) of the use of a filtering capacitor (48) in combination with the capacitor bank (54) and battery (50) in order to provide a power source that has a high energy density and power output. The filter capacitor is used to filter out any ripple currents that maybe introduced into the circuit. It would have been obvious to one having ordinary skill in the art to incorporate the teaching of the reference of Keimel into the invention of Okamura et al. for the purpose of providing a high energy density, high power output device. The reference of Keimel is silent regarding the use of aluminum solid capacitors as filtering capacitors. The reference of Kamiya et al. show aluminum solid capacitors (14 and 15) used as a filter in a AC/DC circuit arrangement. It would have been an obvious matter of design choice to use the aluminum solid capacitors as the filtering capacitors in the invention of Keimel since applicant has not disclosed that the specific use of aluminum solid capacitor solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any type of filtering capacitor. Regarding the values of internal resistance, energy density and output density as claimed in claims 7, 8, 11, 12, 15, 16 and 18 – 20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the EDLCs of Okamura with the claimed values, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

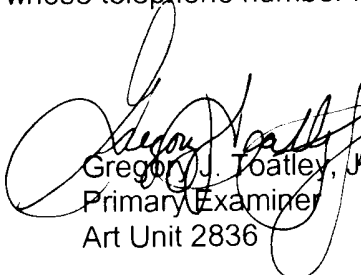
Pertinent Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference of Endo et al. (US 4056764 A) teaches of the use of a combination of high power output and high-energy capacity elements in a power supply system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Toatley, Jr. whose telephone number is 703-308-7889. The examiner can normally be reached on Mon. - Fri. 7:00 a.m. to 3 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.


Gregory J. Toatley, Jr.
Primary Examiner
Art Unit 2836

GJT Jr.